University of York
Department of Management Studies
Working Paper No. 20
ISSN Number: 1743-4041

Sustained Competitive Advantage and the Modern Labour Theory of Value

Steven Toms
Department of Management Studies, University of York

Acknowledgements

I would like to thank Steve Floyd and three anonymous reviewers for detailed and constructive comments. Thanks also to Mike Wright, two anonymous reviewers at the British Academy of Management Conference, St. Andrews, 2004, the participants at the European Critical Accounting Studies Conference, Queen Mary, 2004, and the participants at a seminar at the University of York Department of Management Studies.

Abstract

The paper argues that the principal components of the Resource- Based View (R-BV) as a theory of sustained competitive advantage (SCA) are not a sufficient basis for a complete and consistent theory of firm behaviour. Two important missing elements are governance arrangements and value theory. Specifically the paper proposes a link between governance and value theory through a 'modern labour theory of value' (MLTV). The link operates first from the labour process, where value is created but is imperfectly observable by firm governance mechanisms and imposes monitoring costs. Second it operates through contractual arrangements which impose fixed cost structures on activities with variable revenues. The paper thereby explains how value originates in risky and difficult to monitor productive processes and is transmitted as rents to organizational and capital market constituents. It then reviews other recent contributions to the R-BV arguing that the SCA-MLTV approach overcomes some of the gaps inherent in the alternatives, and thus offers a more complete and integrated view of firm behaviour.

Key words: Resource-based view, labour process theory, theory of value, governance, competitive advantage

Sustained Competitive Advantage and the Modern Labour Theory of Value

The resource-based view (R-BV) explains the competitive advantage of organizations in terms of bundles of resources (Amit and Schoemaker, 1993; Rumelt, 1984), which are valuable, rare, inimitable and non-substitutable (VRIN) (Barney, 1991). It follows that the R-BV needs a theory of value if it is to be a convincing theory of competitive advantage. Competitive advantage is defined as delivering sustainable above-normal returns (Peteraf, 1993). For the purposes of the analysis that follows below, sustained competitive advantage (SCA) is defined as the process of delivering sustained abnormal returns to shareholders. Linking the R-BV and value theory offers the *basis* of a resource-based *theory* of the firm, where, following Grant (1996), the firm is an instrument for integrating individuals' knowledge. The approach *contributes* to a theory of competitive heterogeneity, by offering a consistent theory of rents as a by-product of a consistent theory of value. Because SCA is thereby linked to the notion of economic profit (Barney, 2002), a theory of value is required for the further reason of promoting the accurate computation of such profits. Recent theoretical literature, whilst acknowledging the requirement for a theory of value, has adopted two quite narrow and to some extent mutually exclusive perspectives. One strand examines processes within the organization (Denrell et al., 2003), which might be conceptualized in terms of production, transaction and governance costs (Madhok, 2002). Another considers market interactions (Hoopes et al, 2003), particularly the division of value through bargaining games (Lippman and Rumelt, 2003a, 2003b, MacDonald and Ryall, 2004).

The problems with the first approach are the reification of the firm, discovery of value in haphazard resource combinations, neglect of how separable stakeholder groups appropriate through governance processes and the need to make tautological

assumptions about capital values and discount rates a priori. The second strand tends to assume value and concentrate on its distribution, primarily between market place buyers and sellers, and between agents with ready-made products without hierarchy, history or stakeholder interests. A framework is required to assess and unify the elements contained in these diverse approaches. Some attempts have already been made, using the notions of value creation and value capture (Bowman and Ambrosini, 2000), and these are developed further.

The modern labour theory of value (MLTV), as presented here, offers an integrated framework to address many of the separate omissions of existing theoretical approaches. Classical labour theory of value (CLTV) suggests the source of value lies in human action in the productive process. The MLTV, which is a contribution of this paper, goes further, suggesting that whilst the CLTV proposition about the source of value is true, the value creation and value capture processes are boundedly stochastic. That is the value creation process is best observable by its capricious creator within the bounds of the organizational (or market) setting and progressively less observable (with increased monitoring cost) by those concerned with superintendence of the valorization process and the appropriation of surplus. In other words the modern MLTV, unlike its classical predecessor, is concerned with governance processes. It is consistent with Grant's (1996) view that knowledge is created by the individual, whilst the firm is a mechanism for its application. An additional dimension of MLTV is the cost structure, which refers to the degree of variability arising from the employment contract. If employee remuneration is not precisely linked to revenue, the expected (risk adjusted) rate of profit includes a rent element. The reason is that either revenue falls and staff costs are paid anyway, in which case there is a labour rent, or revenue rises and staff costs remain fixed, in

which case profit rises above normal as labour's share in net output falls. In summary, if the SCA approach to the R-BV is to be a core theory of business strategy, like any core theory, it requires an integration of transaction, production and governance costs (Williamson, 1991), and MLTV offers the means of such integration.

The contribution of the paper is therefore to offer a theory of SCA based on a consistent theory of value. The remaining sections are structured as follows. The next section below presents an integrated model illustrating proposed relationships between the principal theoretical components. In a third section, the framework is used to assess recent major theoretical contributions to the valuation question in the competitive advantage literature and to consider what is necessary to provide a unifying theory. The discussion deals with the internal and value chain perspectives of Madhok (2002) and Denrell et al, (2003) and then moves on to consider the market-based bargaining and payments perspectives of Lippman and Rumelt (2003a, 2003b) and the value price cost framework of Hoopes et al (2003). Whilst recognizing the contribution of each, the discussion highlights omissions which are addressable through the MLTV approach. Residual problems common to all theories, with particular focus on the capital measurement issue, are then addressed. A final section suggests areas for further research and draws conclusions.

Knowledge, Value, and Appropriation: An Integrated Model

As Grant (1996, p.112) suggests, a physiocratic approach, locating value in a single production factor along the lines of CLTV, is essential for a knowledge-based theory of value. Notwithstanding this assumption, Marx's categorical extensions of Smith and Ricardo in the CLTV literature, for example, use-value and socially necessary labour, have been used sparingly in the debates on R-BV and value. There has been

little detailed engagement with classical economics (as an exception, see Bowman, 2003), and little effort in general to extend the analysis of the classical economists.[1]

The current paper uses several components of classical and recent theory to develop the MLTV. The first is the fundamental link between socially necessary labour[2], standard cost and replacement cost asset values (Bryer, 1999). These are the components of an underlying relationship between asset values and normal and abnormal rates of return, and hence sustained competitive advantage (SCA). These relationships are developed further to show that such returns are systematically related to cost structures embedded in the labour process. Second, the possibility of rent transfer between stakeholder groups (Coff, 1999). Consistent with Ricardo, rent is 'the difference between the produce obtained by the employment of two equal quantities of labour and capital' (Marx, 1984, p.649). Extending this notion, where knowledge is unevenly distributed within firms and between firms and their investors, rents accrue to firm insiders or financial market insiders based on access to superior information. Because firm insiders are employees and managers, the realized wage is the socially required rate for the job plus or minus rent elements arising from access to information asymmetries in the production process and contract related cost structures. Conversely, realized returns accruing to shareholders in a financial market reflect both the underlying rate of profit plus or minus realizable managerial and labour rents.[3] The third component is the consideration of tacit knowledge. Employees hold their positions because the perceived value of their tacit and other knowledge exceeds their market cost. In R-BV terms, the firm that employs such individuals has a basis for SCA because a competing firm cannot replicate the asset base through straightforward market exchange processes. The problems for management are observing, controlling and valorizing what is done with that time and

this problem intensifies to the extent that subordinates hold tacit knowledge. These problems lead to the fourth component, which is the process of organizational control and the mix between behaviour and output controls (Ouchi and Maguire, 1975). The balance shifts from the former to the latter, to the extent that process observation by supervisors is problematic. Fifth, as the labour process is not directly observable, the employer of labour and the capital market investor are exposed to financial risk arising from information asymmetry. Each of these five points is developed in more detail below.

Finally, before presenting the model, some discussion is necessary about the most important underlying assumption of both CLTV and MLTV that the source of value is attributable to human action within the productive process.[4] Because commodities are systematically sold at higher prices on leaving the productive process in comparison to the prices at which they enter it, there must be some commodity within the process that adds value systematically. Without this condition aggregate profits are zero and the economy is a zero sum game. Further, labour time is priced in the market, but labour power is not. Specifically therefore labour time is transferred to the product with a degree of intensity that is a function of both physical effort and mental processes. MLTV places appropriate emphasis on the mental processes, so that senior managers as well as junior staff spend time creating value, specifically where their administrative activities are a necessary condition for productive activity to occur.[5] Productive activity is all activity that adds value including service provision, not just factory production.

As long as the labour process is defined to include both mental and physical processes, this view is consistent with Schumpeter's (1934) argument that value and abnormal profits arise from innovation. As long as the value created from such mental

and physical activities is greater than the market value of labour time, the firm has an incentive to retain the employees whose individual or collective efforts generate the value. At the same time the firm has the basis for making abnormal returns and therefore SCA.

To develop a theory of SCA from a MLTV perspective, it is necessary to establish a basic relationship between individual knowledge and the means whereby it is embedded in the labour process, and subsequent monitoring and valorization. Physical effort and readily quantifiable skills are the resources most easily replicable. Such explicit skills are those more easily generated through generic training and education processes external to the firm. As labour processes become more deeply ingrained as tacit skills, they become more difficult to replicate. Super-normal profits consistent with the organizational aspects of SCA (Barney, 1991) arise from firm specific assets, managerial economies of scope, and organizational mechanisms of co-ordination (Penrose, 1959, Teece, 1980, Coff, 1997).[6] As the firm invests in assets such as specialized production facilities, trade secrets and engineering experience (Teece et al 1997) over time (Dierickx and Cool, 1989), tacit knowledge is embedded in technically complex routines. According to the knowledge-based view SCA arises from such routines (Spender, 1989, Nonaka, 1991), but recognition that individuals create the knowledge, which firms can then apply (Grant, 1996) leads in the MLTV to a tension between rent appropriation by individuals and team-based profit appropriation as SCA.[7]

Ambrosini and Bowman (2001, p.816) suggest a continuum with explicit and deeply ingrained skills at either end. However, they do not incorporate specific governance and control mechanisms that would allow a specific stakeholder group, for example shareholders, to engage in systematic value capture. Figure 1 uses this

continuum to include tacit knowledge as a starting point, but extends the analysis to include the important additional dimension of task complexity in the labour process, and cost behaviour, monitoring costs, control mechanisms and appropriation in the valorization process. In other words, to consider the relationship between knowledge location and value appropriation as part of a full description of the productive process, set out in figure 1 as a horizontal continuum of dimensions of value creation through to ultimate value capture.

Figure 1 about here

The valorization process comprises four elements: cost behaviour, control, monitoring, and appropriation. Insofar as specific assets associated with SCA are not valued in an external market, and are therefore illiquid and non-realisable, they generate fixed costs rather than variable costs. Similarly the cost of hiring knowledge intensive labour generates fixed cost. Therefore as tacit knowledge and the potential degree of SCA rises under R-BV assumptions, so does the fixity of cost. As suggested in figure 1, there is also a continuous relationship between the degree of tacitness and complexity in the labour process and the ability of external stakeholders to monitor the separable labour processes that make up the firm and their joint interactions. This follows from the definition of tacit knowledge, because the process is less readily explainable and understood by an outsider and is consistent with the R-BV, tacit knowledge is implicated in SCA. External stakeholders' two methods of monitoring, behavioural (or action) and output control are also implicated in the tacitness and complexity of the labour process, and the extent of fixed production costs and monitoring costs in the valorization process. Tasks that are simple to perform and

replicate are more easily subjected to control through the division of labour and repetition, and more easily flexed in response to changes in demand, so there is greater emphasis on action control. Where the process is complex, difficult to observe and dependent on embedded fixed costs, rather than costly monitoring a process that is difficult to understand and unresponsive to changes in demand, output control might be relied upon, so that the producer has to account for actions in financial terms. In the latter case, there is an additional element in the labour process, which involves the transformation of heterogeneous physical and mental inputs into homogeneous monetary outputs. Following Ouchi and Maguire (1975), behaviour and output controls may not be direct substitutes, but may be observable in independent contexts depending on understanding of means-ends relationships and complex interdependencies respectively. Finally, as far as appropriation is concerned, the more tacit labour processes create assets that are unique, valuable, through processes that generate difficult to monitor fixed costs, the more likely resulting abnormal profit will be appropriated by insiders. Inside appropriation is at the expense of external capital providers or at the expense of other participants in joint ventures and consortia.

There are several interesting corollaries arising from these relationships that are worth mentioning. First there is a conflict between the managerial objective of achieving SCA and the objective of maximizing shareholder value. Managers pursue rents rather than optimal growth (Rugman and Verbeke, 2004) and these rents arise from their role in the labour process, as supervisors and participants. If firms are identified as having achieved competitive advantage by reference to accounting ratios corresponding to superior performance from a shareholder perspective (eg Peters and Waterman, 1982), it is likely that such performance is based on explicit and easily replicable skills and that associated competitive advantage is short-term or illusory.

A second and related point is that monitoring costs in figure 1 also lie on a continuum suggesting that as the degree of tacitness rises, the probability of surplus appropriation by those closest to the labour process also rises. In other words the monitoring problem is not simply confined to the providers of external capital but is also faced directly by the line managers at each hierarchical level above the labour process. Line managers have the incentive to externalize tacit knowledge embedded in labour processes for which they are responsible, for example through the division of labour, or spend organizational resources themselves on monitoring, so that rents accrue at their level of the hierarchy. Insofar as line management itself is part of the labour process, for example where managerial action alters the product or service delivered, further individually appropriable tacit knowledge arises and monitoring costs are imposed from above on progressively senior levels of management. Ultimately the imposition comes from the capital market to the top of the hierarchy, creating a similar but separate set of monitoring issues discussed below.

A third corollary is that under these assumptions the SCA-MLTV approach is made consistent with labour process theory (LPT). R-BV and LPT are from divergent backgrounds within the strategic management literature, reflecting context and process based approaches respectively. To clarify the consistency, it is necessary to evaluate the assumptions from the labour process perspective. The most important consideration for many labour process theorists (eg Knights, 1990, Wilmott, 1990) is the role of power rather than profit. Their consequent rejection of Marx's value categories explains the divergence between LPT and the CLTV (Rowlinson and Hassard, 2001, p.90). As Nicholls (1999) has pointed out, the valorization stage, which is concerned with the transformation of labour use values into realized profit, of the productive process has been neglected in the labour process literature. Figure 1

suggests an integrated approach, since labour rent originates in the productive process, and a valorization stage is included. In terms of labour time, capital comprises accumulated dead labour plus the living labour time, at whatever intensity, transferred into output through the labour process. Capital can be conceptualized in labour hours without reference to valorization, but the valorization process is nonetheless the crucial link underpinning the relationship between tacit knowledge and monitoring costs. Precise valorization is the outcome of two elements, realization into monetary or exchange value through capital circulation (per Marx, 1976, p.992-7) and under MLTV assumptions, the effectiveness or otherwise of supervisory arrangements to moderate the effects of information asymmetry. Asymmetry arises because workers sell but retain control over their 'labour power', defined by Marx as those physical and *mental* capabilities, which the worker sets in motion whenever producing a use-value (1976, p.271).

These assumptions are consistent with CLTV and specifically with Marx, if the labour process is treated as part of the productive forces (Marx, 1976, pp.285-290), which also incorporate knowledge assets, for example scientific expertise where applied using technology (Marx, 1974, pp.540, 699, 706). Meanwhile the labour process leads to inventiveness on the one hand through the imagination of individual labourers at the outset of the labour process (Marx, 1976, pp.284) and alienation through the process of specialization on the other. In the MLTV extension, to the extent that inventiveness and knowledge can be individually appropriated, the labour process itself becomes a risky set of activities for administering managers and outside financial stakeholders.

Arising from these risks, a fourth implication is the impact on capital market participants such as individual shareholders and investment managers. As suggested

above, realization through capital circulation is assumed to be part of the valorization process. At the top end of the continuum where all knowledge is tacit, it is impossible for the investor to understand the processes whereby use values are transformed into exchange values through realization and thereby generated into profits. Even so, where there is some degree of capital dependence (Prechel, 2000), for example in high growth sector firms, insiders will have an incentive to reserve some profit and signal its availability to outside investors instead of appropriating it for themselves. Insofar as the labour process within one firm is unrelated to those governing the profits of the average firm, which include many explicit processes, the variation in profit will appear random and therefore as 'noise'. Such randomness corresponds to the firm-specific risk.[8] In the limiting case where all knowledge is tacit, all share prices become random. Under such conditions, following Grossman and Stiglitz, (1980), share prices would convey no information to investors. In the opposite case where all knowledge is explicit, information is symmetrical and markets become thin, as there are no abnormal returns (rents) and there is no incentive to trade (Grossman and Stiglitz, 1980). Also under these conditions with R-BV assumptions all firms possess the same easily imitable resources for the same activities and there is no SCA.

These intra-firm and firm-financial market interactions provide the possibility of theory of profit determination consistent with notions of competitive advantage and the MLTV. Abstracting from the continua in Figure 1, a model showing the relationship between the labour cost characteristics of tacit knowledge, task complexity and valorization process characteristics, and expected profits consumed by external investors can be developed. Figure 2 shows the rate of return required by a risk-averse external investor as a function of the fixed cost labour ratio (FCLR). The

FCLR is the proportion of fixed cost to total cost for firm *i* divided by the proportion of fixed cost to total cost for all firms.

Figure 2 about here

Some abstraction will assist with conceptualization. Suppose a firm with a single employee, *w* and a single shareholder, *s* and that the actions of *w* can be made totally observable or explicit to *s* and through contractual/legal arrangements *w* has no bargaining power. Suppose also that *s* pays *w* only for the output actually produced (as opposed to for the time *w* spends at work). Under these assumptions,[9] *s* is able to appropriate profits from the labour process under risk free conditions. If fairly efficient capital markets are also assumed, the rate of profit should resemble the social rate of return from risk free investment (point A in figure 2), for example base interest rates.[10] It can also be seen that if these assumptions are gradually relaxed, so that *w* is able, through the acquisition of bargaining power, to fix wages in the face of varying demand conditions, then the rate of profit required to compensate the rational investor will rise. Because the variability of the realised rate of profit increases proportionately to the degree of fixity in wage cost, even where diversified, investors will require, and should obtain where capital markets remain reasonably efficient, a proportionate increase in compensation (for the average risk firm, to point B in figure 2).[11] There is a systematic increase insofar as under conditions of aggregate growth the expected change in aggregate demand is positive in which case because wages are fixed, realised profits rise. An important reason for the positive linear association between fixity of labour cost and shareholder risk is that according to implicit contract theory, employees are more risk averse (Rosen, 1985). Therefore in this model, the capital

market absorbs the insurance element of implicit labour contracts through a risk premium. These results are theoretically consistent with the Sharpe (1964) and Lintner (1965) Capital Asset Pricing Model (CAPM), in that stock return is proportionate to systematic risk. The difference is that the risk source is related to value creation, labour process and value appropriation, rather than mere share price and stock market index co-variation.

Figure 2 about here

Suppose next that *w* has tacit knowledge and can conceal value creating or value destroying activities in the labour process, so that the effort bargain shifts in favour of *w* and the return to *s* corresponds to point C in figure 2. Again, *s* faces increased risk, but the increase is specific to the labour process and *s* avoids this risk by incurring monitoring costs or shifting to output control, for example setting a target normal rate of profit based on observable rates elsewhere. These rates reflect, and are reduced by, aggregate monitoring cost. Alternatively, *s* avoids the risk through portfolio diversification, but in doing so reduces the capacity further for monitoring the performance of any one firm. Purchases of other shares also run the risk of negative rents through premium prices charged by market makers, benefiting from inside or asymmetric information advantages (point D in figure 2). In general, points C and D constitute examples of rents arising from non R-BV sources, such as monopoly power, information asymmetry and other elements of competitive heterogeneity.

The interactions between tacit knowledge and monitoring costs are suggestive of some interesting contradictions within the corporate economy. Alienation, through

excessive specialization and associated removal of intellectual content, is traditionally viewed as a source of exploitation by unscrupulous profit maximizing capitalists. In fact, in industries where such exploitation might occur, such as cotton textiles in the British industrial revolution or in modern China, although aggregate profit rates may be high, there is no basis for SCA at the level of any individual firm.[12] In contrast, where the labour process has significant intellectual content, thereby creating entry barriers for competitors, the accrued profit to the individual maximizing capitalist may be still small and the rents accrued by intermediate producers and market-makers large, due to increased monitoring problems.[13] In short, because rent is the difference between realized price and underlying value, if labour is the source of value, information asymmetry is the source of rent. Trade-offs between the two tend to equalize the aggregate rate of profit.[14]

Figure 3 about here

Figure 3a shows a formal decomposition of total observed profits into profit and rent elements. Following figure 2, there is a risk free profit element, to which is added a labour rent based systematic premium equating to the FLCR. Further rents arise from knowledge-based asymmetries within the production process and as a residual category, from other non-labour based resources. Consistent with the economic theory advanced so far, total observed profit consists of normal profit plus rents. Normal profit, following figure 2, corresponds to average levels of fixed labour cost. To the extent that the individual firm has a FLCR higher than average, it earns a systematically higher rent, which forms the first component of MLTV-based abnormal return. The second component arises from knowledge-based production

process asymmetries. SCA associated with the MLTV, consistent with the R-BV, is the distance B – 0. Further rents, which are accrued through heterogeneous access to other physical and informational assets (C – B), are not part of an R-BV story of SCA, but are consistent with competitive heterogeneity. Where such rents are present, they will complement other categories of rent, thereby increasing total observed profit, or will increase profit in the absence of other categories.

Figure 3b shows how these trade offs within a MLTV R-BV framework explain the observed level of profit and shows when and how observed abnormal profits are associated with SCA. Coff's (1999, figure 1) model provides examples of these trade-offs locating rents specifically in stakeholder bargaining power, asset specificity and team complexity. Figure 3b shows the general case that follows from the above discussion, in which profits and SCA are explained jointly by tacit knowledge VRIN assets in the resource base and the process of surplus appropriation. The framework shows the labour and valorization processes to be in direct and dynamic contradiction. In the top row of the table, consistent with the R-BV, firms achieve SCA through their tacit knowledge resources. However, observable profits differ, so that where external monitoring and accountability is effective the profits from SCA are above normal levels and accrue to external stakeholders (quadrant 1). Where monitoring and accountability are ineffective, rents accrue to insiders (quadrant 2). Reported profits will be normal, since insiders will report and distribute the level of profit required for minimally satisfying investors and preventing them from exiting their investment. Remaining surplus will be consumed as rents by the insiders. On the bottom row, there are no VRIN assets and therefore there is no basis for SCA. Because there are no VRIN assets, rent appropriation by insiders is also ruled out. Profits are therefore normal in both quadrants 3 and 4. In quadrant 4, losses

(ie less than normal profits) are possible if managers seek to appropriate rents and are not well monitored, but only in the very short-run. Because there are no VRIN knowledge assets, the normal rate of profit is well known and therefore deviations below the rate are easy to police. Insofar as SCA and abnormal profits only occur consistently in quadrant 1, governance arrangements can be seen as contributing to observable competitive advantage. Of course even here the trade-offs referred to in figure 1 still apply, so that increased investment in VRIN assets also increases monitoring costs. Therefore abnormal profits and SCA are only concurrent where governance mechanisms are cost-effective. In short, heterogeneous value creation processes and cost-effective governance processes are jointly necessary and sufficient conditions for SCA.

There are relatively few devices available to outside investors to ensure that their firm operates in quadrant 1. An example might be to recruit outside directors with sufficient independence from the main board but who at the same time possess the sector-specific expertise required to monitor knowledge based assets. However, in the general case, availability of such directors suggests inter-firm knowledge sharing which is in itself inconsistent with firm-level SCA. One further possibility is the use of ideology, and notions such as 'shareholder value maximization'. Arguably, such notions might be more easily shared between outside investors and the firm's top management. Top management might therefore employ ideology to mitigate apparently selfish utilization of tacit knowledge to consume wealth within the organization, consistent with Penrose's view that firms and their managers are essentially profit-orientated, and that managerial opportunism and the agency problem constitute only a special case (Lockett and Thompson, 2004). However, the there is little rational basis for managerial pursuit of abnormal profit, since it derives from a

contradictory appeal to the selfish interests of another group, ie the shareholders, and because normal rather than abnormal profits are a sufficient basis for the survival of the firm.

The trade-offs in figures 1,2 and 3 explain why capitalism is a dynamic system operating within social and technically determined limits. There is an incentive to invest in knowledge assets insofar as the marginal product is positive net of monitoring costs. Because tacitness can rise to the point of total opacity there is an upward limit on the level of investment. Similarly there is a downward limit to alienation, since if all processes are explicit, although monitoring costs are zero, individual firms cannot achieve SCA under R-BV assumptions.[15] The realized rate of profit for the firm, as an asset bundle, depends on the interaction of these contradictions, but is unrelated to the competence or otherwise of the firm's management, who, where rational will appropriate surpluses privately. The rate of surplus accruing to individual workers and managers depends on the possession of knowledge and the monitoring cost.

COMPARISON OF THE MLTV-SCA WITH OTHER APPROACHES

Implications for transaction cost economics and the resource based theory

The above analysis to some extent parallels Madhok's (2002) response to Williamson's (1991) call for the integration of transaction cost, production cost and governance skills. However there are important differences and the model developed above forms a useful basis to critique the approach adopted by Madhok and the wider limitations of transaction cost and traditional resource-based approaches.

Madhok (2002) re-examines the work of Adler and colleagues (Adler, 1993, Adler and Borys, 1996; Adler et al 1999) concerning the General Motors/Toyota joint venture (NUMMI) and its relationship with suppliers. He argues the case illustrates that the conventional trade-off between production and governance efficiency can be spurious where inter-firm transactions benefit from resource complementarity and appropriate deployment of governance skills. Such an outcome is entirely possible, but is not well supported by Madhok's argument. First, his model supposes that 'the firm' is able to judge the *value* of the productive resources of both parties (Madhok, 2002, p.545, emphasis added). The reification of the firm as a set of governance arrangements is a limitation of the transaction cost approach, and as Grant (1996) suggests in the knowledge-based view where organizations are reified as routines. There is especially a problem where knowledge, and access to knowledge is asymmetric, between principal and agent, and between joint-venture and supplier management groups. Moreover, 'the firm's judgement' of value abstracts from the valorization process and the hierarchical governance of these processes in the organization.

Second, the 'governance skills', which can lead to mutual enhancement of production skills, are defined vaguely as the 'skills involved in structuring and managing the exchange relationship' (Madhok, 2002, p.545). Again there is a problem of reification because such skills are 'possessed' by the firm (Madhok, 2002, p.546). To refine the approach, it is important to clarify who possesses such skills. Skill involved in structuring the exchange relationship implies understanding and knowledge of accountability systems, including mechanisms for controlling the valorization process, valuing the resulting output and measuring performance. The ability to impose such systems implies asymmetrical possession of governance skills

across principal agent groups and from one firm to another, likely to be a function of power differentials and access to knowledge, ranging from the tacit to the technically explicit. A further problem with Madhok's governance skills, linked to their reification, is the absence of any consideration of shareholder-based governance mechanisms. The implication is that investors (individual shareholders and fund managers) also possess governance skills, although Madhok does not address the point. He therefore oversimplifies the question of combined (or commingled) risky assets, arguing that costs associated with them become more variable. More likely is that as relationship specific investments in the partnership reduce transaction cost through information sharing, trust, and production efficiency (Madhok, 2002, p.545), then costs become more fixed; a consequence likely to be enhanced from the portfolio effects of combining risky assets. Also the outside investor is faced with potentially higher variability not in costs, but in profit. Following the logic of the reformulated CAPM in figure 2 above, the variability of shareholder cash flow increases where costs are fixed.[16] As suggested by MLTV-SCA framework, investors are more likely to be required to invest in governance skills, at cost to themselves, to prevent the greater appropriation of profit by insiders when costs are fixed, since they bear greater risk otherwise. In this fashion investor's transaction costs are aggregated with production costs and are a function of the increased risk arising from the joint venture. Risk and associated governance cost place an upward limit on the process of market to hierarchy substitution, limiting the extent of vertical integration. Conversely, hierarchy to market substitution increases cost variability, thereby making the rate of profit relatively fixed and reducing governance costs but also undermining the basis of SCA, since any given set of activities becomes more easily replicable. The rate of profit therefore resembles normal profit. Madhok's contribution is to show that cases

such as NUMMI represent a possible optimum compromise in terms of transaction cost reduction. The extension of his framework to include investors would show *whose* transaction cost.

Third, Madhok argues if the resource-based perspective is applied to vertical relationships, competitive advantage is enhanced because the supplier becomes a resource and a strategic asset (2002, p.545). However, in RB-V terms, this can only be the case if the asset is valuable, and the implication is that there is a transfer of value from the supplier to the purchasing firm. If purchasing firm managers have governance skills, they can valorize them by imposing a behaviour control based accountability system on the supplier, but this involves an offsetting monitoring cost. However if the personnel of one firm can have governance skills, it follows that the other firm's personnel can have them too. Thus if the managers and employees of the supplier firm are able to use their governance skills to appropriate the value created in production for themselves, then neither the supplier itself nor the governance skills of the managers in the purchasing company can be valuable R-BV assets contributing to SCA. Without an R-BV explanation, the success of NUMMI is reduced to transaction cost based explanations of quasi-vertical integration, ie repeat transactions, relationship specific investments etc. To contribute anything, the R-BV needs its own theory of value creation and value capture.

Fourth, in Madhok's framework behaviour can be 'other-oriented' or self-interested, where following Adler, (2001), the parties' preferences are endogenous to the social processes of the relationship. Again this abstracts from the implied uneven distribution of power and knowledge between participants. Where powerful purchasers engage 'proactively' with suppliers, mechanisms for passing on the cost of quality control and for fixing the transfer price usually accompany. Suppliers and

employees might transfer value in this fashion to more powerful parties, but not out of the conscious philanthropy implied by 'other-orientation'. In MLTV-SCA framework, it is also true that social processes are endogenous, as in the labour process, which is characterised as a co-operative activity on the one hand and a process of individual value appropriation on the other, with no assumption required other than rational self-interested behaviour.

Fifth, Madhok suggests that rents may differ according to which supplier is chosen, even though otherwise the transaction characteristics are the same across all transactions, simply because rents attached to a particular resource combination may be particularly valuable. Again, this raises the questions of the determinants of value, how measured, and of value to whom? If it is assumed that valuable resources in differing combinations yield differing combined rents, it still begs the question of why the individual resources have value in the first place?[17] If the NUMMI strategy does lead to differential performance, how will this be measured and by whom? In MLTV, value arises from the labour processes that are combined and co-ordinated. Differential rent, in the case of combined assets, follows Ricardo's definition and reflects the outcome of power and information asymmetries in the valorization and appropriation processes.

The approach SCA-MLTV approach agrees with Madhok's on a sixth point, which is that net economic surplus reflects rents from superior performance minus transactional inefficiencies. Indeed, the trade-off underpins figures 1, 2 and 3 above. It is important for the development of a core theory of business strategy that the elements in Madhok's paper are combined as he suggests, and to do so, as suggested here a core theory of value reconcilable with the analysis of governance is required.

Although addressing the process of value creation, Denrell et al. (2003) share the reified perspective of Madhok. Where they do consider individual agents, instead of merely the firm they are entrepreneurs discovering strategic opportunities through serendipitous assemblages of existing sub-systems of knowledge. Such discoveries would appear to be consistent with managerial rent consumption opportunities, since it is they who have closest access to, or direct possession of, appropriable knowledge and internal arbritage opportunities. Denrell et al. (2003) lack a robust theory of value when examining the valuation of complex resources. They assume that all stage transformations through intermediate to finished products require only labour cost and that such labour is undifferentiated. They also assume that all prices are in present value terms. It follows that the discount rate, or more precisely, the risk-adjusted rate of profit is presupposed. If it is necessary to assume wage rates, prices and profit rates a priori, in a model with two factors of production, labour and capital, it is difficult to see how this model rigorously adds to the theory of value.

The bargaining and payments perspective

The bargaining and payments perspectives of Lippman and Rumelt (L&R) (2003a; 2003b and see also Brandenburger and Stuart, 1996) are to a certain extent similar to the SCA-MLTV approach. However there are also significant differences and SCA-MLTV offers some extensions. The most fundamental difference is that the L&R approach lacks an underlying theory of value creation. The bargaining approach *assumes* a surplus (L&R 2003b, p.1071, emphasis added). Alternatively for the payments perspective, (L&R 2003a) economic profit is set at zero, presumably for all firms in aggregate, implying differences in price and cost sum to zero, or revenues ≡ payments. At the aggregate level, these are merely wealth transfers, implying that

revenue at time *t* is the same as revenue at *t-1*, whereas innovative activity implies wealth creation and a positive sum game in the aggregate. MLTV offers an explanation as to why on aggregate the value of purchased outputs is systematically higher than purchased inputs, and, by corollary, implies that labour does not receive payment equivalent to value.

The L&R analysis therefore needs extension to consider employment relations within the firm. L&R suggest that a farmer (and, to extend their argument for present purposes, an employee within a firm) might through specialized tacit knowledge create and therefore appropriate the associated increase in net revenue. However true this might be of an independent farmer, the ability of an employee to appropriate value is mitigated by the effectiveness or otherwise of monitoring mechanisms and the transformation of individual tacit knowledge into explicit knowledge through time as a function of organizational learning and team-based incentives. Such an extension seems consistent with L&R since where labour is embedded in the firm, co-specialization is implied. In other words, the innovative employee is dependent upon access to some element of the firm's resource bundle, otherwise as L&R suggest, each person would simply appropriate their own contribution (2003b, p.1083). In co-specialization cases, L&R invoke Williamson's (1985) 'fundamental transformation', where competition is replaced by bilateral negotiation.

According to L&R (2003b), the outcome of these negotiations depends on their structure as a bargaining game. A condition is that the game should have a core,[18] otherwise the participants lack the incentive to work together for a co-operatively beneficial outcome. Where an innovative employee possesses tacit knowledge, it is unlikely that person will enter the game unless the firm's incentive structure is such that the employee will appropriate a significant share of the revenues.

Where *ex ante* contracts of employment specify the ownership and rewards from innovation as proprietary to the firm, these incentives will not exist. Such restrictions are consistent with L&R examples which introduce a core, for example a veto or restricted access to a key resource (2003b, p.1079). Assets that achieve this, such as proprietary technology and large fixed asset bases, restrict access from the employees' point of view and prevent them setting up a competing firm. At the same time, they ensure inequality in bilateral bargaining gains, encouraging indirect rent appropriation. The appropriation process in this case, outlined in the MLTV, arises from non co-operation by the innovative employee and imperfect surveillance of effort by the employer, so that rent arising from innovation and greater efficiency is appropriated within the firm through equivalent shirking. An alternative contractual arrangement, which gives the employee incentive to share information, places a core in the game, but with the risk that the employee appropriates the monetary benefit.

As suggested earlier, these problems are compounded where there are multiple hierarchical layers and equivalent opportunities for appropriation by middle managers. Monitoring problems are most acute between the firm's strategic apex and the investor, since the managers at the strategic apex have access to the most powerful and comprehensive surveillance mechanisms within the firm, which they will rationally share with outside investors only when it is to their advantage. Because outside shareholders can only apply output controls to top management, they must rely on monetary representations of results, leaving top management, crucially, in control of the process of transformation of heterogeneous capital resource into homogeneous cash flow equivalent representations. Therefore top management also have the ability to promote internal reinvestment of profits from innovation into perquisites at the expense of dividend payments to shareholders. Also the *way* in

which the firm's managerial hierarchy exercises surveillance is potentially important, through access control or incentivisation (respectively examples of action and output controls, Ouchi and Maguire, 1975). It is in this area that the L&R analysis can be most usefully extended.

A further possible extension is to consider the value of the investment from the shareholder's point of view and hence SCA as the discounted value of future simple rent payments. However, from the MLTV perspective this value is impacted by the risk implicit in future cash flows. Such risk is determined by the ability of other resource providers to fix their cash flow through contractual arrangements (thereby rendering the cash flow to the residual group more variable) and by the problem of asymmetric information.

A final problematic aspect of L&R's (2003a, p.924) analysis is their concluding objective function, that the firm should maximize its wealth and that competition will induce it to maximize payments for scarce resources (PSR). Hiding behind this reification is a simultaneous managerialist and anti-managerialist view of the firm. The managerialist view is implied by the notion of the firm (as opposed to the shareholder) as a repository of wealth. If the firm is to maximize PSR, the implication is that if managerial labour and knowledge are scarce resources, managers must do nothing other than define themselves as scarce, talented and valuable, and maximize their own welfare. In the anti-managerialist view, the forces of competition induce PSR maximization, so there is no room for managerial discretion. However, the implication is that if competition is inhibited by some degree of monopoly, then realized PSR is merely a function of market structure. Such an outcome is equally explained by the CLTV theory of differential rent.

A final problem is the definition of PSR as a residual category, once payments of commodity inputs (PCI) and payments for commodity resources (PCR) have been accounted for. Because the other two categories are defined as commodities, they are also defined to be in perfectly elastic supply. If Revenue = PCI + PCR + PSR (L&R, p.924) and the firm is a price taker in two out of the three categories, then changes in PSR can only be explained with reference to themselves, which removes any analytic properties from the identity. If on the other hand, perfect competition is as defined by Makowski and Ostroy (1995) and L&R (2003b, p.1071), as a condition in which individuals fully appropriate the value they create, then market imperfection implies the transfer of surplus through rent (per Ricardo) rather than value. It also follows that if individuals do not fully appropriate the value they create in a market relation other than perfect competition, this will also by the case in an employment relation. To make the latter point, MLTV, which includes labour rents, does better than Ricardo and the sections of the R-BV literature that ignore the creation of value through human action. Where not dealing with the employment relation this part of L&R's argument is quite similar to classical arguments. Marx extended Ricardo's theory of rent to explain, in similar fashion to L&R, why for example a landowner might restrict access to an entrepreneur in order to share surplus from a business idea through the notion of ground rent. Or how an entrepreneur with an imitable business idea but unique access to land earns rent through the prevention of further development (Dobb, 1973; see also Marx 1984, part VI).

The value price cost (VPC) framework

The VPC approach differentiates between value, defined as the price the customer is willing to pay; price, which is a function of supply and demand; and cost, which is the

cost of production. The framework assumes V > P > C, which is likely to be true when individual cases of competitive advantage are considered, and competitive advantage might arise in individual cases of V > P and P > C (Hoopes et al. 2003). However, in the aggregate V = P = C, otherwise it is not clear why customers would systematically value all products and services above their cost of production. The equality of VPC in the aggregate is also consistent with the payments perspective (L&R, 2003a), but inconsistent with an underlying theory of value creation. If V is systematically higher than C in the aggregate in price terms, then firms must be acquiring a resource for a price below its cost. The only resource all firms share common access to is human resource. As we have seen, it is this resource in particular that not only creates value through intellectual and physical effort, but such effort is also problematic to measure and observe, unlike the costs of other inputs.

In similar fashion to the VPC approach, MacDonald and Ryall (M&R) (2004) attempt to show that value arises from the presence of a willing buyer. There are some interesting corollaries, not least from the R-BV perspective that VRIN assets are neither necessary nor sufficient conditions for SCA. In the case presented (M&R, 2004, p.1321), the cost of production is normalized to zero and the buyer's utility is set at 1. To presuppose utility at a level greater than the cost of production, is however, non-generalizable, since without equivalent payments to production factors utility cannot constitute effective demand. If the case is merely specific then the bargaining game is a question of rent sharing between firm and buyer, rather than value creation. Consistent with M&R, the *appropriation* of value depends on the number of firms and buyers. As in many interpretations that analyse at the level of the firm, there is reification and no consideration of rent splits within the oganization. As with L&R, the M&R analysis could be extended to include the employment relation,

so that bargaining is represented as an interaction between the employee and employer as a buyer of labour.

Problems in capital measurement

The theories of transaction cost, competitive heterogeneity, the RBV and their extensions through the bargaining and payments perspectives rely on the notion of scarcity as the determination of value. All therefore share the same capital measurement problem. Consistent with the basic RBV premisses, if assets are imitable, then profit rates will fall as new firms enter. Or alternatively, there is an inverse and monotonic relationship between the quantity of capital and the rate of return (Samuelson, 1962). However, this relationship can only be sustained if physical (by definition homogeneous) measures of capital are used and there is a one way causal link between capital quantity and the consequent rate of profit. A method of capital valuation is required if we are interested in valuing heterogeneous capital goods (Wicksell, 1934), as is necessary if we are to apply the R-BV. Conventionally, the valuation is the present value of the future cash flows the asset is likely to generate, presupposing a discount rate and therefore a rate of profit. However in the R-BV as in neo-classical economics, the rate of profit follows from the possession of valuable assets. Wicksell effects and the associated problems of capital reversing and re-switching are important challenges to the R-BV, since they imply simultaneous equilibria where firms comprise different combinations of labour and capital at different rates of profit. If either labour or capital is a VRIN asset, the implication is that they are only likely to hold such status within a certain range of profit rates. These issues were raised in the 'Cambridge controversies', but never satisfactorily resolved (Cohen and Harcourt, 2003).

An alternative approach is to value capital assets according to cost of production. Wicksell effects also bedevil this approach, because there is a periodic need to revalue the capital stock to reflect price and technology changes. However, from the MLTV-SCA perspective, these problems are less insuperable. Where a firm has heterogeneous competitive advantage assets, holding gains form a component of abnormal return. Nonetheless the valuation of all inputs involved in the creation of such assets remains problematic. Physical inputs are the easier to cost, but also the more easily replicable. Standardised human activity inputs, which are readily observable and easily variable by contractual arrangements, are also straightforward and the rate of return resembles the social risk free rate (figure 2). To the extent that special categories of skill are more likely sources of competitive advantage, consistent with the knowledge based view (Grant, 1996), and the relationship in figure 2, the required rate of return becomes a linear function of embedded fixed labour cost. Again this is relatively easy to quantify. Problems of asymmetric information, possession of tacit knowledge and monitoring costs impact on individual valuations, but the associated risks are diversifiable by investors and have no systematic impact on expected returns. Corporate boards can impose these expected returns on business units using output controls.

CONCLUSION

The argument presented above has accepted the main assumptions of the context based R-BV. It has also argued for the inclusion of labour process theory, asymmetric information and the analysis of risk, and the proposed MLTV. The combination of these elements shows that a resource-based theory must unite the process and content elements of strategy, through simultaneous interaction of labour management, the

determinants of SCA and relations with capital markets. It has shown that by utilising the MLTV, so that the employment of human resource creates value, but value creation process is in itself risky from the perspective of the monitoring employer and outside investor, a consistent theoretical approach can be applied to the theory of SCA. Without the links, advocated above, to LTV and labour process theory, and mechanisms of corporate governance, the R-BV remains merely a view and not a theory, because it lacks a consistent basis for asset valuation. The theory also explains that the roots of competitive advantage lie in the labour process, but with the corollary that maximizing the associated investment in tacit knowledge and associated difficult to replicate assets is fundamentally inconsistent with maximizing the value of shareholder's investments.

There are several directions for further research. The Coasian approach advocated by Madhok (2002) represents an important contribution and can be usefully extended by further unpacking the firm into its stakeholder components and analysing the governance arrangements required to manage inter-stakeholder relations. The bargaining (M&R, 2004; L&R, 2003b) and payments (L&R, 2003a) perspectives can be extended by considering the relative bargaining power of insiders (as suggested by Coff, 1999). Such a perspective would facilitate the development of multiple stakeholder models, as extensions to the focus on the shareholder value in the narrowly focused theory of SCA presented above. All of these approaches are focused on value appropriation rather than value creation and all could usefully extend their perspectives in these directions.

In summary, the R-BV is either not a theory of SCA, or if it is, it must reject the *a priori* assumptions of profit and utility maximization and that have underpinned neo-classical economics for the last 150 years. Instead the underlying source of value

in the labour process must be recognised and competitive advantage seen as the outcome of the unequal division of surplus between the creators and appropriators of value. If the R-BV can be a theory in these terms, it is a classical, not a neo-classical theory.

References

Adler, P.S. (1993). 'The learning bureaucracy: New United Motors Manufacturing Inc', *Research in Organizational Behaviour*, Vol.15, Staw, B.M. and Cummings, L.L. (eds.) JAI Press: Greenwich, CT, 111-194.

Adler, P.S. (2001). 'Market, hierarchy and trust: the knowledge economy and the future of capitalism'. *Organization Science*, **12**: 214-234.

Adler, P.S. and Borys, B. (1996). 'Bureaucracy: coercive versus enabling'. Administrative Science Quarterly, **41**: 61-89.

Adler, P.S. Goldoftas, B and Levine, D. (1999). 'Flexibility versus efficiency? A case study of model changeovers in the Toyota production system. *Organization Science*, **10**, 4368.

Ambrosini, V. and Bowman, C. (2001). 'Tacit knowledge: Some suggestions for operationalization'. *Journal of Management Studies*, **38**, 811-829.

Amit, R. and Shoemaker ,P. J. H. (1993). `Strategic assets and organizational rents'. *Strategic Management Journal*, **14**, 33-46.

Barney, J.B. (1991). `Firm resources and sustained competitive advantage'. *Journal of Management*, **17**, 99-120.

Barney, J.B. (2002). *Creating and sustaining competitive advantage.* 2nd Ed., Addison Wesley.

Bowman, C. and Ambrosini, V. (2000). 'Value creation versus value capture: towards a coherent definition of value in strategy'. *British Journal of Management*, **11**, 1-15.

Bowman, C. (2003). 'Differential labour and competitive advantage: embedding resource-based theory within Marx's labour theory of value'. *Cranfield School of Management Working Papers***. 3/03.**

Brandenburger and Stuart, G**.** (1996). 'Value-based business strategy'. *Journal of Economics and Management Strategy*, **5**, 5-24.

Bryer, R.A (1999). 'A Marxist critique of the FASB's conceptual framework*, Critical Perspectives on Accounting*, **10**, 551-89.

Cohen, A.J. and Harcourt G.C. (2003). 'Whatever happened to the Cambridge capital theory controversies'. *Journal of Economic Perspectives*, **17**, 199-214.

Coff, R.W. (1997). 'Human assets and management dilemmas: Coping with hazards on the road to resource-based theory'. *Academy of Management Review*, **22**, 374-402.

Coff, RW. (1999). 'When competitive advantage doesn't lead to performance: the resource-based view and stakeholder bargaining power'. *Organization Science* **10**: 119-133.

Coff, R and Lee, P. (2003) 'Insider trading as a vehicle to appropriate rent from R&D'. *Strategic Management Journal*. **24**, 183-190.

Denrell, J., Fang, C. and Winter, S.G. (2003). 'The economics of strategic opportunity'. *Strategic Management Journal*, **24**, 977-990.

Dierickx, I. and Cool, K. (1989). 'Asset stock accumulation and sustainability of competitive advantage'. *Management Science*, **35**, 1504-1511.

Dobb, M. (1973). *Theories of Value and Distribution since Adam Smith*. Cambridge: CUP.

Grant, R. M. (1996). `Toward a knowledge-based theory of the firm'. *Strategic Management Journal*. **17**, 109-122.

Grossman, S. and Stiglitz, J. (1980). 'On the impossibility of informationally efficient markets'. *American Economic Review*. **70**, 393-408.

Hoopes, D.G., Madsen, T.L. and Walker G. (2003). 'Why is there a resource-based view? Toward a theory of competitive heterogeneity'. *Strategic Management Journal*. **24**, 10, 889-902.

Katz, L. (1987) 'Efficiency wage theories: a partial evaluation', in S. Fischer (ed.), *NBER Macroeconomics Annual*. 235-275. Cambridge, MA: MIT Press.

Knights, D. (1990). 'Subjectivity, power and the labour process', in Knights, D. and Wilmott, H. *Labour Process Theory*. London: Macmillan.

Lintner, J., (1965) The valuation of risk assets and the selection of risky investments in stock portfolios and capital budgets, *Review of Economics and Statistics,* 47, 13-37.

Lippman, S.A. and Rumelt, R.P. (2003a). 'A bargaining perspective on resource advantage'. *Strategic Management Journal*, **24**, 1069-1086.

Lippman, S.A. and Rumelt, R.P. (2003b). 'The payments perspective: micro-foundations of resource analysis'. *Strategic Management Journal*, **24**, 903-927.

Lockett, A. and Thompson, R.S. (2004). 'Edith Penrose's contributions to the resource-based view: an alternative perspective'. *Journal of Management Studies*. **41**, 193-204.

MacDonald, G. and Ryall, M.D. (2004). 'How do value creation and competition determine whether a firm appropriates value'? *Management Science*, **50**, 1319-1333.

Madhok, A. (2002). 'Reassessing the fundamentals and beyond: Ronald Coase, the transaction cost and resource based theories of the firm and the institutional structure of production'. *Strategic Management Journal*, **23**, 535-550.

Makowski, L. and Ostroy, J.M. (1995). Appropriation and efficiency: a revision of the first theorem of welfare economics, *American Economic Review*, **85**, 808-827.

Markowitz, H. (1959). *Portfolio Selection*, New York: Wiley.

Marx, K. (1974). *Grundrisse: Foundations of the critique of political economy*. Harmondsworth: Penguin.

Marx, K. (1976). *Capital: a critique of political economy. Vol. 1*, Harmondsworth: Penguin Books.

Marx, K. (1984). *Capital: A critique of political economy. Vol.3*, London: Lawrence and Wishart.

Mohun, S. (1991). 'Socially necessary labour', in Bottomore, T. (ed*.) A dictionary of Marxist thought*, Oxford: Blackwell.

Modigliani, F. & Miller, M. (1958). 'The cost of capital, corporation finance and the theory of investment', *American Economic Review*, **48**, 261-297.

Mueller, F. (1996). 'Human resources as strategic assets: an evolutionary resource-based theory'. *Journal of Management Studies.* **33**, 6, 757-786.

Nicholls, T. (1999). 'Industrial sociology and the labour process', in Beynon, H., Glavinis, P. (eds). *Patterns of social inequality: Essays for Richard Brown*. London: Longman.

Nonaka, I. (1991). 'The knowledge creating company'. *Harvard Business Review*. **69**, 96-104.

Ouchi, W.G. and Maguire, M.A. (1975). 'Organizational control: Two functions'. *Administrative Science Quarterly*, 20, 559-569.

Penrose, E. T. (1959).'The theory of growth of the firm'. Wiley: New York.

Peteraf, M. A. (1993). `The cornerstone of competitive advantage: a resource-based view'. *Strategic Management Journal***. 14**, 179-191.

Peters, T. J. and Waterman, R. H. (1982*). In search of excellence: lessons from America's best-run companies*. New York: Harper & Row

Prechel, H., *Big Business and the State: Historical Transitions and Corporate Transformations*, 1880s-1990s (New York, SUNY Press, 2000)

Rowlinson, M. and Hassard, J. (2001), 'Marxist political economy, revolutionary politics and labor process theory'. *International Studies of Management and Organization*. **30 (4)**, 85-111.

Rosen, S. (1985). 'Implicit contracts: a survey'. *Journal of Economic Literature*, **23**, 1144-75.

Rumelt, R. (1984). `Toward a strategic theory of the firm'. In: R. Lamb (ed.), *Competitive Strategic Management*. 556-570. Prentice-Hall, Englewood Cliffs, NJ.

Rugman, A. M. and Verbeke, A. (2004). 'A final word on Edith Penrose'. *Journal of Management Studies***. 41**, 1, 205-17.

Samuelson, P.A. (1962). 'Parable and realism in capital theory: The surrogate production function'. *Review of Economics Studies*, 29, 193-206.

Schumpeter, J. (1934). 'The theory of economic development'. Cambridge MA, Harvard.

Sharpe, W. F. (1964). 'Capital asset prices: A theory of market equilibrium under conditions of risk'. *Journal of Finance,* **19**, 425-442.

Spender, J-C (1989). *Industry recipes: The nature and sources of managerial judgement*. Oxford: Blackwell.

Teece, D., (1980). 'Economies of Scope and the Scope of the Enterprise'. *Journal of Economic Behavior and Organization*, **1**, 223-47.

Teece, D., Pisano, G. and Sheun, A. (1997) 'Dynamic Capabilities and Strategic Management', *Strategic Management Journal*, **18,** 509-33.

Wicksell, K. (1934). *Lectures on political economy, Vol.1*. London: Routledge.

Williamson, O. (1985). *The economic institutions of capitalism*. New York: The Free Press.

Williamson, O. (1991). 'Strategizing, economizing, and economic organization'. *Strategic Management Journal*, **12** (Special issue), 75-94.

Wilmott, H (1990). 'Subjectivity and the dialectics of praxis: Opening up the core of the labour process analysis' in Knights, D. and Wilmott, H. *Labour Process Theory*, London: Macmillan.

Wright, P.M., McMahan, G.C. and McWilliams A. (1994). `Human Resources and Sustained Competitive Advantage: A Resource-based Perspective'. *International Journal of Human Resource Management*. **5,** 301-326.

Figure 1: The production process, knowledge location and the distribution of surplus

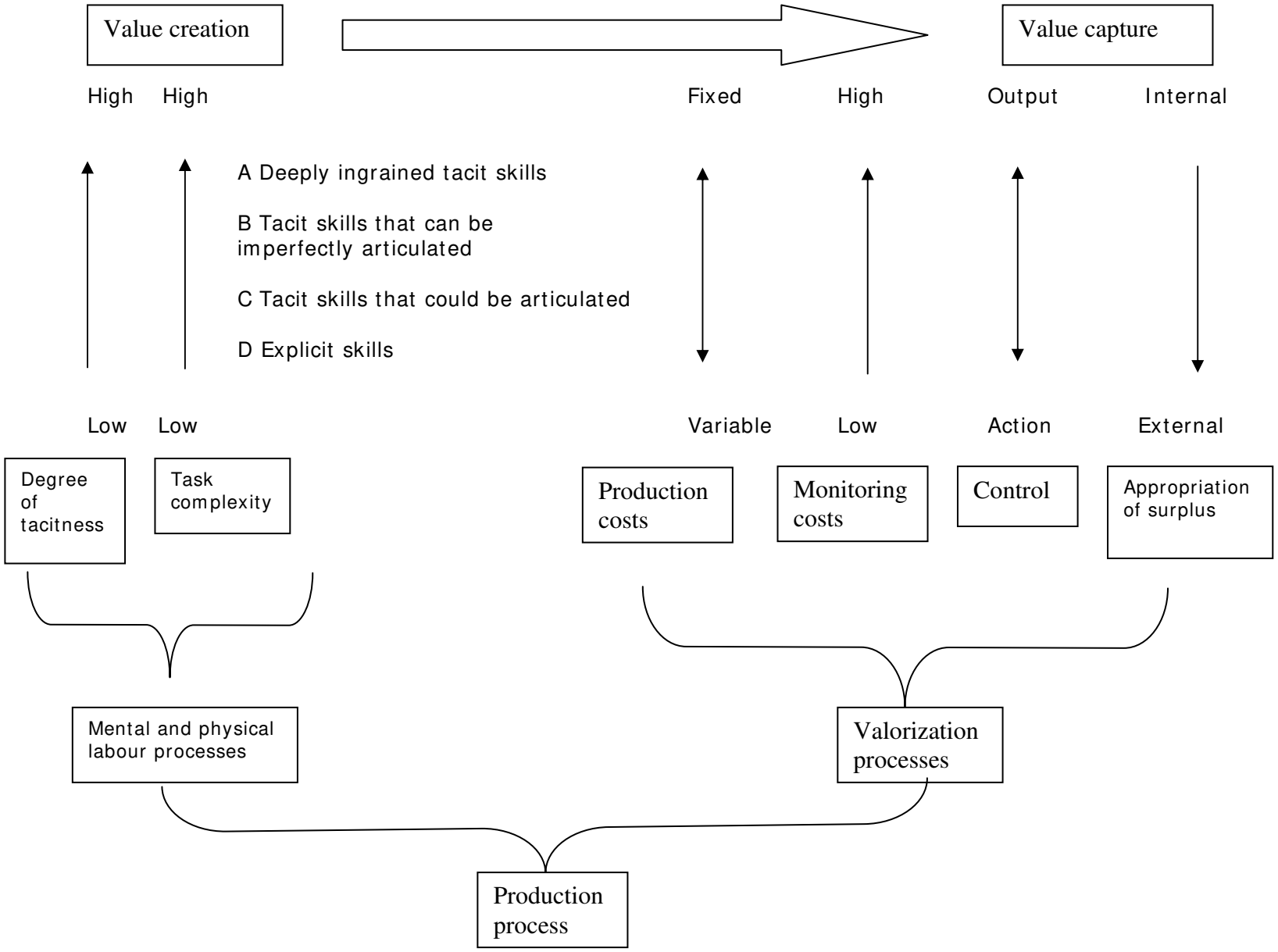
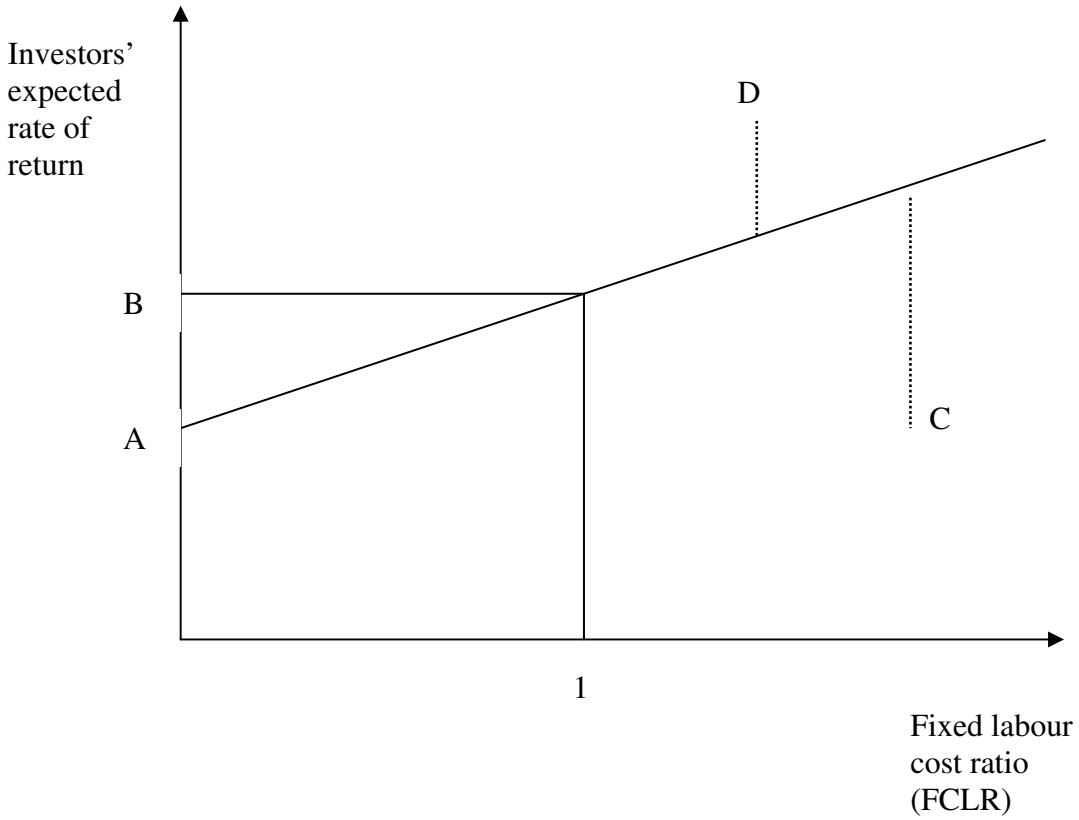


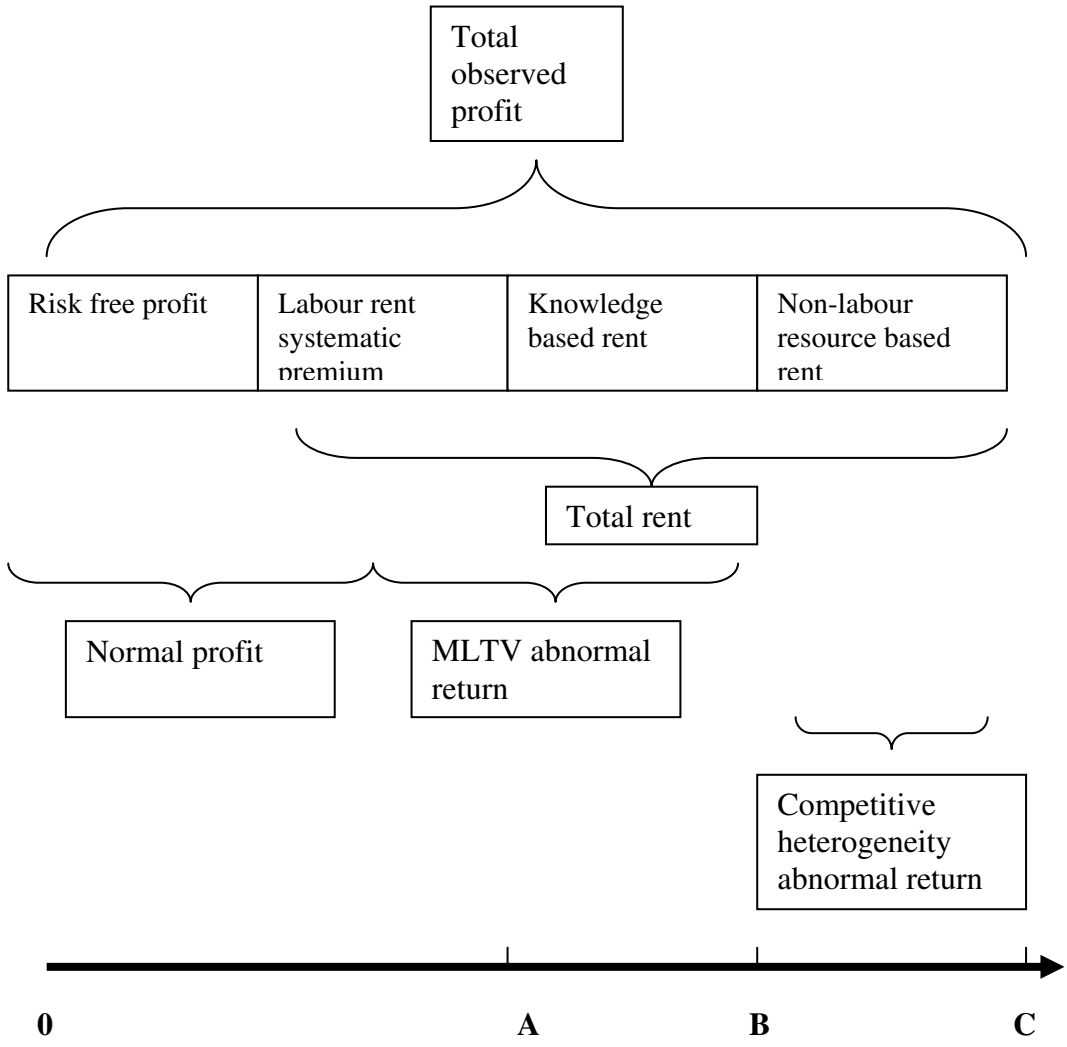
Figure 2



Notes:
FLCR = The ratio of fixed cost to total cost for firm *i*, divided by the ratio of fixed cost to total cost for all firms (or reference group of competitors).
A = the social risk free rate of profit, where all labour costs are perfectly variable and the profit rate has zero variance.
B = the rate of return achieved where FLCR = 1, where the firm is achieving 'normal' profits. Labour cost variability is the same as the market average.
C, D = respectively, examples of positive and negative shareholder rents

Figure 3: The determinants of sustained competitive advantage and observable profits

a) Rent, profit and competitive advantage



Increasing Profit and Competitive Advantage

A – 0 = normal (average) profit

B – 0 = MLTV-SCA profit (consistent with R-BV)

C - B = profit from holding non-labour rent generating resources (consistent with competitive heterogeneity)

b) Resource characteristics and surplus appropriation

		Appropriation of surplus	
		External	**Internal**
Knowledge resource base (VRIN assets)	**Tacit**	*Quadrant 1* • **Observed profits**: Abnormally high • **SCA**: Yes	*Quadrant 2* • **Observed profits**: Normal • **SCA:** Yes
	Explicit	*Quadrant 3* • **Observed profits**: Normal • **SCA**: No	*Quadrant 4* • **Observed profits**: Normal or losses • **SCA:** No

Notes

[1] There is also disagreement amongst Marxist scholars as to whether Marx indeed did advocate the labour theory of value (Rowlinson and Hassard, 2001, pp.86-88).

[2] Socially necessary labour provides the link between the apparently supply side only CLTV and MLTV and the market. It is the required time for production under normal conditions of efficiency for a given society with that level of skill and labour intensity (Mohun, 1991). Or put another way, represents a social standard cost (Bryer, 1999) of producing what the customer is willing to pay for. If the socially necessary time is exceeded, for example through inefficiency, less surplus is realized and conversely more is realized where production is achieved in less time.

[3] Labour rents accrue to employees (and managers) where the wage rate exceeds the socially necessary labour. Where employees possess knowledge that is not easily replicable, particularly when routinized within the organization, possession of such knowledge provides workers with opportunities to raise real wages, if they can avoid accountability and appropriate the efficiency benefits (see for example efficiency wage theories, Katz, 1987).

[4] The emphasis here on the productive process, could lead to the conclusion that Marx ignored demand, but that was not the case. 'The rule, that the labour time expended on a commodity should not exceed that which is socially necessary for its production, appears, in the production of commodities generally, to be established by the mere effect of competition; since to express ourselves superficially *each single producer is obliged to sell his commodity at its market price*.' (Marx, 1976, p.465, emphasis added).

[5] As seniority increases managers may find more of their time allocated to non-productive monitoring activities.

[6] Investment in strategic human resource assets (Mueller, 1996; Wright et al. 1994) is a sufficient but not a necessary condition for realized super-normal profits, since the employment of such assets simultaneously leads to the creation of internal rent appropriation possibilities.

[7] For Grant the firm is set of incentives for co-ordinating team production. Therefore where a soccer team has complementary skills, the team members need to be tied together by long-term relations (Grant 1996, p.113). The MLTV goes one-step further, recognizing that individuals understand their role in the team's effort bargain and will resist the appropriation of surplus by external stakeholders.

[8] Firm specific risk is defined as the residual component of total risk not explained by generic economy wide factors systematically affecting all firms.

[9] It is assumed that labour is the only cost (so there is no variation for example in the organic composition of capital). Also it is assumed that there is a single period capital turnover (ie all the assets purchased at the beginning of the period are used up by the

end of the period). These assumptions are for brevity, but the model is generalizable when they are relaxed.

[10] Because labour cost co-varies perfectly with revenue, the residual, profit, is a fixed ratio of revenue.

[11] The precise relationship is rf x FCLR. FCLR in figure 2 and is also consistent with the covariance of the firm *i* profits with aggregate profits of all firms.

[12] Assuming unlimited product imitation, as a form of Bertrand competition, MacDonald and Ryall (2004) reach a similar conclusion.

[13] For example where abnormal returns from insider stock purchases rise as the firm's R&D intensity increases (Coff and Lee, 2003).

[14] The lack of a consistent theory of profit equalization has been a long-running problem for CLTV. In MLTV, differential risky profit rates arise in the productive process and are equalized through the capital market.

[15] Or more precisely, removing the reification, individual capitalists or investors cannot make abnormal returns.

[16] See Modigliani and Miller's (1958) example utilizing interest costs. Moreover, as suggested by portfolio theory (Markowitz, 1959), the combination of two or more assets will always result a net reduction in portfolio variance unless the underlying cash flows of the individual assets are perfectly correlated.

[17] This criticism can also be applied to the payments perspective approach of Lippman and Rumelt (2003).

[18] The core is defined as the set of pay-offs that ensure the sub-set of pay-offs to any sub-set of players is greater than the maximum value available to that group working on its own (L&R, 2003b, p.1072).